

# List of All Chemicals

## P Phytolacca americana (Phytolaccaceae)

### Common name(s)

Pokeweed

### How used

GRAS

\*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

| Chemical                                           | Part                                                                                                                                                                                                | All    | Low PPM | High PPM | StdDev | *Reference |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------|----------|--------|------------|
| 3-ACETYLALEURITOLIC-ACID                           | Seed                                                                                                                                                                                                | --     | --      |          |        | *          |
| 3-ACETYLOLEANOLIC-ACID                             | Seed                                                                                                                                                                                                | --     | --      |          |        | *          |
| 3-OXO-3-CARBOMETHOXY-24-NOROLEAN-12-EN-29-OIC-ACID | Plant                                                                                                                                                                                               | --     | --      |          |        | *          |
| ALKALOIDS                                          | Fruit                                                                                                                                                                                               | --     | 22000.0 | 2.73     |        | *          |
| ALPHA-SPINASTEROL                                  | Fruit                                                                                                                                                                                               | --     | --      |          |        | *          |
| <b>Activities (2)</b>                              |                                                                                                                                                                                                     |        |         |          |        |            |
| Antiinflammatory >Phenylbutazone                   |                                                                                                                                                                                                     |        |         |          |        |            |
| Antipyretic                                        |                                                                                                                                                                                                     |        |         |          |        |            |
| AMERICANANIN                                       | Seed                                                                                                                                                                                                | --     | --      |          |        | *          |
| <b>Activities (2)</b>                              |                                                                                                                                                                                                     |        |         |          |        |            |
| Hepatoprotective                                   | Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. Zulu Medicinal Plants. An inventory. University of Natal Press, Pietermaritzburg. 450 pp.                                               |        |         |          |        |            |
| Hepatotropic                                       | Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. Zulu Medicinal Plants. An inventory. University of Natal Press, Pietermaritzburg. 450 pp.                                               |        |         |          |        |            |
| ANTHOCYANIN                                        | Fruit                                                                                                                                                                                               | --     | 93000.0 |          |        | *          |
| <b>Activities (3)</b>                              |                                                                                                                                                                                                     |        |         |          |        |            |
| Antiviral                                          |                                                                                                                                                                                                     |        |         |          |        |            |
| Hemostat                                           | Spring, M.A. 1988. Ethnopharmacologic Analysis of Medicinal Plants Used by Laotian Hmong Refugees in Minnesota. Journal of Ethnopharmacology, 26: 65-91, 1989.                                      |        |         |          |        |            |
| Pesticide                                          |                                                                                                                                                                                                     |        |         |          |        |            |
| ASCORBIC-ACID                                      | Shoot                                                                                                                                                                                               | 1360.0 | 16184.0 | 0.41     |        | *          |
| <b>Activities (112)</b>                            |                                                                                                                                                                                                     |        |         |          |        |            |
| Acidulant FEMA 6,000                               | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry                                                                                                           |        |         |          |        |            |
| Aldose-Reductase-Inhibitor                         | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95 |        |         |          |        |            |
| Analgesic 5-10 g/day                               |                                                                                                                                                                                                     |        |         |          |        |            |
| Angiotensin-Receptor-Blocker                       |                                                                                                                                                                                                     |        |         |          |        |            |
| AntiAGE 2,000 mg/day                               | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95 |        |         |          |        |            |
| AntiCFS 500-1,000 mg                               |                                                                                                                                                                                                     |        |         |          |        |            |
| AntiCTS 1,000 mg 3x/day                            |                                                                                                                                                                                                     |        |         |          |        |            |
| AntiCrohn's 50-100 mg/day/orl/man                  | Martindale's 29th                                                                                                                                                                                   |        |         |          |        |            |
| AntiLyme 500-2,000 mg                              |                                                                                                                                                                                                     |        |         |          |        |            |
| AntiRaynaud's 500 mg 1-2x/day                      |                                                                                                                                                                                                     |        |         |          |        |            |
| Antiaggregant                                      | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reservse insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95 |        |         |          |        |            |
| Antiaging 400 mg/day                               |                                                                                                                                                                                                     |        |         |          |        |            |
| Antiallergic                                       |                                                                                                                                                                                                     |        |         |          |        |            |
| Antialzheimeran 2,000-6,000 mg/day                 |                                                                                                                                                                                                     |        |         |          |        |            |
| Antiarthritic 0.2-1 g/day                          |                                                                                                                                                                                                     |        |         |          |        |            |
| Antiasthmatic 1,000 mg/day                         | Werbach, M. 1993. Healing with Food. Harper Collins, New York, 443 pp.                                                                                                                              |        |         |          |        |            |

|                                           |                                                                                                                                                                                                            |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antiatherosclerotic                       |                                                                                                                                                                                                            |
| Antibacterial                             | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Anticataract 350 mg/day                   | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                                                             |
| Anticataract 400 mg/day                   | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95 |
| Anticataract 1 g 3x/day                   |                                                                                                                                                                                                            |
| Anticervicaldysplastic 1,000-2,000 mg/day |                                                                                                                                                                                                            |
| Anticlimacteric 500-5,000 mg/day          |                                                                                                                                                                                                            |
| Anticold 1-2 g/man/day                    |                                                                                                                                                                                                            |
| Antidecubitic 500 mg/man/2x/day           | Martindale's 28th                                                                                                                                                                                          |
| Antidementia                              |                                                                                                                                                                                                            |
| Antidepressant 2,000 mg/day               | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                                                             |
| Antidiabetic                              | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95 |
| Antidote (Aluminum)                       | Economic & Medicinal Plant Research, 6: 189.                                                                                                                                                               |
| Antidote (Cadmium)                        | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antidote (Lead)                           | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antidote (Paraquat)                       | Martindale's 28th                                                                                                                                                                                          |
| Antieczemic 3.5-5 g/day                   | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                                                             |
| Antiedemic 1 g/man/day                    | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antiencephalitic                          | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antiendometriotic 2,000 mg/day            |                                                                                                                                                                                                            |
| Antifatigue 500-1,000 mg                  |                                                                                                                                                                                                            |
| Antifibrotic 1,000-2,000 mg               |                                                                                                                                                                                                            |
| Antigallstone 1,000-3,000 mg/day          |                                                                                                                                                                                                            |
| Antigastritic                             |                                                                                                                                                                                                            |
| Antigingivitic                            |                                                                                                                                                                                                            |
| Antiglaucomic 2 g/day                     | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                                                             |
| Antihangover 1,000 mg                     |                                                                                                                                                                                                            |
| Antihemorrhagic 1 g/man/day               | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antihepatitic 2-6 g/man/day               | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antihepatotoxic                           | Economic & Medicinal Plant Research, 6: 189.                                                                                                                                                               |
| Antiherpetic 1-5 g/day                    |                                                                                                                                                                                                            |
| Antihistaminic 2 g/day orl man            |                                                                                                                                                                                                            |
| Antihypertensive                          |                                                                                                                                                                                                            |
| Antiinfertility 1 g/day                   | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                                                             |
| Antiinflammatory                          | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).                                                           |
| Antileptic 1.5 g/man/day                  | Martindale's 28th                                                                                                                                                                                          |
| Antilithic 1,000-3,000 mg/day             |                                                                                                                                                                                                            |
| Antimaculitic                             |                                                                                                                                                                                                            |
| Antimeasles                               | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antimenopausal 500-5,000 mg/day           |                                                                                                                                                                                                            |
| Antimigraine                              | Martindale's 29th                                                                                                                                                                                          |
| Antimutagenic                             | Economic & Medicinal Plant Research, 6: 235.                                                                                                                                                               |
| Antineuramidase                           |                                                                                                                                                                                                            |
| Antinitrosic 1 g/man/day                  | Martindale's 28th                                                                                                                                                                                          |
| Antiobesity 1 g 3x/day                    | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                                                             |
| Antiorchitic                              | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antostearthritic 1 g 2x/day               | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                                                             |
| Antosteoporotic 500 mg/day                |                                                                                                                                                                                                            |
| Antioxidant 100 ppm                       |                                                                                                                                                                                                            |
| Antiparkinsonian 1 g 2-3x/day             |                                                                                                                                                                                                            |
| Antiparotitic                             | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antiperiodontitic 1 g 2x/day              | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                                                             |
| Antipneumonic                             | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).                                                           |
| Antipodriac                               | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antipoliomyelic                           | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                                                               |
| Antipyretic                               | Economic & Medicinal Plant Research, 6: 189.                                                                                                                                                               |
| Antiradicular                             | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. <i>Syndrome X - The complete nutritional program to prevent and reserve insulin resistance</i> . John Wiley & Sons, New York. 272 pp. \$24.95 |
| Antiretinotic                             |                                                                                                                                                                                                            |
| Antirheumatic                             |                                                                                                                                                                                                            |
| Antirhinitic 1,000 mg 3x/day              |                                                                                                                                                                                                            |
| Antiscorbutic 10 mg/man/day               | Martindale's 28th                                                                                                                                                                                          |

|                                            |                                                                                                                                                                                                    |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antiseptic MIC=3.3-217 mg/ml               | Martindale's 28th                                                                                                                                                                                  |
| Antiseptic 4-8 g/day                       | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95 |
| Antishingles                               | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.                                                                                                               |
| Antispasmodic 500-5,000 mg/day             |                                                                                                                                                                                                    |
| Antistress 500-1,000 mg                    |                                                                                                                                                                                                    |
| Antisyndrome-X 1-4 g/day                   | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95 |
| Antitumor (Gastric)                        |                                                                                                                                                                                                    |
| Antitumor (Lung)                           |                                                                                                                                                                                                    |
| Antiulcer                                  |                                                                                                                                                                                                    |
| Antiviral 1-5 g/day                        |                                                                                                                                                                                                    |
| Apoptotic 1-10 mM                          |                                                                                                                                                                                                    |
| Asthma-preventive 1,000 mg/day/orl         | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).                                                           |
| Beta-Adrenergic Receptor Blocker           |                                                                                                                                                                                                    |
| Beta-Glucuronidase-Inhibitor 1.5 g/day/man |                                                                                                                                                                                                    |
| Calcium-Antagonist                         |                                                                                                                                                                                                    |
| Cancer-Preventive                          | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.                                                                                                            |
| Cardioprotective                           |                                                                                                                                                                                                    |
| Cold-preventive 1-2 g/day                  | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.                                                                                                               |
| Collagenic                                 |                                                                                                                                                                                                    |
| Detoxicant                                 |                                                                                                                                                                                                    |
| Diuretic 700 mg/man/orl                    |                                                                                                                                                                                                    |
| Fistula-Preventive                         | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).                                                           |
| Hypocholesterolemic 300-1,000 mg/day       | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.                                                                                                               |
| Hypoglycemic                               | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95 |
| Hypotensive 1,000 mg/man/day               |                                                                                                                                                                                                    |
| Immunomodulator                            |                                                                                                                                                                                                    |
| Immunostimulant                            | Challem, J., Berkson, Burt, and Smith, Melissa Dianne. 2000. Syndrome X - The complete nutritional program to prevent and reserve insulin resistance. John Wiley & Sons, New York. 272 pp. \$24.95 |
| Interferonogenic                           | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).                                                           |
| Lithogenic                                 | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.                                                                                                               |
| Mucolytic 1 g/woman/day                    | Martindale's 28th                                                                                                                                                                                  |
| Pesticide                                  |                                                                                                                                                                                                    |
| Uricosuric 4 g/man/day                     | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.                                                                                                               |
| Urinary-Acidulant                          | Martindale's 29th                                                                                                                                                                                  |
| Vasodilator                                |                                                                                                                                                                                                    |
| Vulnerary                                  | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).                                                           |

## ASTRAGALIN

Leaf -- -- \*

### Activities (7)

ACE-Inhibitor ID50=180 ug/ml rat (24 hr.)

Aldose-Reductase-Inhibitor IC30=1 uM

Aldose-Reductase-Inhibitor IC62=10 uM Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. *Phytochemistry*, 23: 1885-1888.

Antileukemic

Expectorant

Hypotensive Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. *Chem. Pharm. Bull.* 38(4): 1049-1052, 1990.

Immunostimulant

## BETA-CAROTENE

Shoot 52.0 621.0 2.11 \*

**Activities (53)**

|                                    |                                                                                                                                                        |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Allergenic                         |                                                                                                                                                        |
| Androgenic?                        | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| AntiPMS                            |                                                                                                                                                        |
| Antiacne                           | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Antiaging                          |                                                                                                                                                        |
| Antiarthritic                      |                                                                                                                                                        |
| Antiasthmatic                      | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Anticancer                         | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.                                                                           |
| Anticarcinomic                     | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Anticervicaldysplastic             |                                                                                                                                                        |
| Anticorony 50 mg/man/2 days        |                                                                                                                                                        |
| Antihyperkeratotic                 |                                                                                                                                                        |
| Antiichthyotic                     | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Antileukoplakic                    |                                                                                                                                                        |
| Antilipoperoxidant IC71=50 ug/ml   |                                                                                                                                                        |
| Antilupus 150 mg/man/day/2 mos     | Martindale's 28th                                                                                                                                      |
| Antimaculitic                      |                                                                                                                                                        |
| Antimastitic                       | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Antimutagenic                      | Economic & Medicinal Plant Research, 6: 235.                                                                                                           |
| Antioxidant                        | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Antiozenic                         |                                                                                                                                                        |
| Antipapillomic                     |                                                                                                                                                        |
| Antiphotophobic 30-300 mg/man/day  | Martindale's 29th                                                                                                                                      |
| Antipityriasic                     | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Antiporphyrinic 30-300 mg/man/day  | Martindale's 28th                                                                                                                                      |
| Antiproliferant                    | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY.                                                                           |
| Antipsoriac                        | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Antiradicular                      | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Antirheumatic                      |                                                                                                                                                        |
| Antistress                         | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.                                                                   |
| Antitumor                          | Simon, P.W. Carrots and Other Horticultural Crops as a Source of Provitamin A Carotenes. HortScience, 25(12): 1495, 1990.                              |
| Antitumor (Breast) IC45=60 ug/ml   |                                                                                                                                                        |
| Antitumor (CNS) IC43=45 ug/ml      |                                                                                                                                                        |
| Antitumor (Colon) IC43=45 ug/ml    |                                                                                                                                                        |
| Antitumor (Lung) IC30=60 ug/ml     |                                                                                                                                                        |
| Antitumor (Prostate)               |                                                                                                                                                        |
| Antitumor (Stomach) IC26=45 ug/ml  |                                                                                                                                                        |
| Antiulcer 12 mg 3x/day/man/orl     | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Antiulcer 15,000-25,000 IU/day     |                                                                                                                                                        |
| Antixerophthalmic                  | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.                                                                   |
| COX-1-Inhibitor IC78=50 ug/ml      |                                                                                                                                                        |
| COX-2-Inhibitor IC82=50 ug/ml      |                                                                                                                                                        |
| Cancer-Preventive 22 ppm           | Jim Duke's personal files.                                                                                                                             |
| Chemopreventive                    |                                                                                                                                                        |
| Colorant                           | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Gastroprotective                   |                                                                                                                                                        |
| Immunostimulant 180 mg/man/day/orl | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Interferon-Synergist               |                                                                                                                                                        |
| Mucogenic                          | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Phagocytotic                       | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Prooxidant 20 ug/g                 |                                                                                                                                                        |
| Thymoprotective                    | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Ubiquiot                           | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |

BETANIN

Shoot

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**Activities (5)**

Antioxidant  
Antiperoxidant  
Heme-Sparing  
Lipoxygenase-Inhibitor  
 $IC_{50}=0.5\text{ }\mu\text{M}$   
Pigment

Jeffery B. Harborne and H. Baxter, eds. 1983. *Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.* Taylor & Frost, London. 791 pp.

## CAFFEIC-ALDEHYDE

|  | Plant | -- | -- | * |
|--|-------|----|----|---|
|--|-------|----|----|---|

## CALCIUM

|         |       |       |        |       |   |
|---------|-------|-------|--------|-------|---|
| CALCIUM | Shoot | 530.0 | 6307.0 | -0.62 | * |
|---------|-------|-------|--------|-------|---|

**Activities (28)**

AntiPMS 1 g/day

Antiallergic 500 mg/day

Antianxiety

Davies, S., and Stewart, A. 1990. *Nutritional Medicine.* Avon Books, New York. 509pp.

Antiarrhythmic 500-1,500 mg

Antiarthritic 1,000 mg/day

Antiatherosclerotic 500 mg/day

Werbach, M. 1993. *Healing with Food.* Harper Collins, New York, 443 pp.

Anticlimacteric 1,000-1,500 mg/day

Antidepressant

Davies, S., and Stewart, A. 1990. *Nutritional Medicine.* Avon Books, New York. 509pp.

Antidote (Aluminum)

Davies, S., and Stewart, A. 1990. *Nutritional Medicine.* Avon Books, New York. 509pp.

Antidote (Lead)

Davies, S., and Stewart, A. 1990. *Nutritional Medicine.* Avon Books, New York. 509pp.

Antihyperkinetic

Davies, S., and Stewart, A. 1990. *Nutritional Medicine.* Avon Books, New York. 509pp.

Antihypertensive

Davies, S., and Stewart, A. 1990. *Nutritional Medicine.* Avon Books, New York. 509pp.

Antiinsomniac

Davies, S., and Stewart, A. 1990. *Nutritional Medicine.* Avon Books, New York. 509pp.

Antimenopausal 1,000-1,500 mg/day

Antiobesity

Werbach, M. 1993. *Healing with Food.* Harper Collins, New York, 443 pp.

Antiosteoporotic 500-2,000 mg/day

Antiperiodontitic 750 mg/day

Werbach, M. 1993. *Healing with Food.* Harper Collins, New York, 443 pp.

Antirheumatic 1,000 mg/day

Antistress 500-1,500 mg/day

Davies, S., and Stewart, A. 1990. *Nutritional Medicine.* Avon Books, New York. 509pp.

Antitic

Davies, S., and Stewart, A. 1990. *Nutritional Medicine.* Avon Books, New York. 509pp.

Anxiolytic 500-1,500 mg/day

Calcium-Channel-Blocker

Diuretic

Werbach, M. 1993. *Healing with Food.* Harper Collins, New York, 443 pp.

Hypocholesterolemic 500 mg/day

Werbach, M. 1993. *Healing with Food.* Harper Collins, New York, 443 pp.

Hypotensive 1 g/day

Werbach, M. 1993. *Healing with Food.* Harper Collins, New York, 443 pp.

Laxative 1,000-1,200 mg

Tranquilizer 500-1,500 mg/day

Vasodilator

## CALCIUM-OXALATE

|                 |       |    |    |   |
|-----------------|-------|----|----|---|
| CALCIUM-OXALATE | Plant | -- | -- | * |
|-----------------|-------|----|----|---|

**Activities (4)**

Emetic

Inflammatory

Laxative

Lithogenic

## CARBOHYDRATES

|               |       |         |          |       |   |
|---------------|-------|---------|----------|-------|---|
| CARBOHYDRATES | Shoot | 37000.0 | 441000.0 | -0.86 | * |
|---------------|-------|---------|----------|-------|---|

## CARYOPHYLLENE

|               |       |    |    |   |
|---------------|-------|----|----|---|
| CARYOPHYLLENE | Fruit | -- | -- | * |
|---------------|-------|----|----|---|

## Activities (31)

|                                    |                                                                                                                                                                                                                                                                         |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aldose-Reductase-Inhibitor         |                                                                                                                                                                                                                                                                         |
| Allergenic                         |                                                                                                                                                                                                                                                                         |
| Analgesic                          | Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.                                                                                                                                                         |
| Antiacne                           |                                                                                                                                                                                                                                                                         |
| Antiasthmatic                      | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.                                                                                                                                               |
| Antibacterial                      |                                                                                                                                                                                                                                                                         |
| Anticariogenic<br>MIC=>1,600 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against <i>Streptococcus mutans</i> . <i>J. Agric. Food Chem.</i> 41: 1102-1105.                                                                                        |
| Antidermatitic                     |                                                                                                                                                                                                                                                                         |
| Antiedemic                         | Shimizu,*M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' ( <i>Lavandula latifolia</i> Vill.)2). <i>Chem. Pharm. Bull.</i> 38(8): 2283-2284, 1990. |
| Antifeedant 500 ppm                | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.                                                                                                                      |
| Antiinflammatory<br>IC50=100 uM    | Shimizu,*M., et al. 1990. Anti-inflammatory Constituents of Topically Applied Crude Drugs. IV.1) Constituents and Anti-inflammatory Effect of Paraguayan Crude Drug 'Alhucema' ( <i>Lavandula latifolia</i> Vill.)2). <i>Chem. Pharm. Bull.</i> 38(8): 2283-2284, 1990. |
| Antileishmanic                     |                                                                                                                                                                                                                                                                         |
| Antionychytic                      | Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.                                                                                                                                                         |
| Antiproliferant                    |                                                                                                                                                                                                                                                                         |
| Antispasmodic                      |                                                                                                                                                                                                                                                                         |
| Antistaphylococcic                 |                                                                                                                                                                                                                                                                         |
| Antistreptococcic                  |                                                                                                                                                                                                                                                                         |
| Antitumor                          | Zheng, G-Q., Kenney, P.M., and Lam, L.K.T. Sesquiterpenes From Clove ( <i>Eugenia caryophyllata</i> ) As Potential Anticarcinogenic Agents. <i>Journal of Natural Products</i> 55(7): 999-1003, 1992.                                                                   |
| Antiulcer                          | Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.                                                                                                                                                         |
| Candidicide                        |                                                                                                                                                                                                                                                                         |
| FLavor FEMA 20-200                 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry                                                                                                                                                                               |
| Fungicide                          |                                                                                                                                                                                                                                                                         |
| Gastroprotective                   | Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.                                                                                                                                                         |
| Insectifuge                        |                                                                                                                                                                                                                                                                         |
| Irritant                           | Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.                                                |
| Larvicide                          |                                                                                                                                                                                                                                                                         |
| Mosquitocide                       |                                                                                                                                                                                                                                                                         |
| Perfumery                          | Merck 11th Edition                                                                                                                                                                                                                                                      |
| Pesticide                          |                                                                                                                                                                                                                                                                         |
| Sedative                           |                                                                                                                                                                                                                                                                         |
| Termitifuge                        | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990.                                                                                                                                                                |

## ESCULENTIC-ACID

Fruit -- -- \*

## FAT

Shoot 4000.0 48000.0 0.03 \*

## FRUCTOSE

Fruit -- 14000.0 -0.72 \*

## Activities (8)

|                       |                                                                                                                                                        |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antialcoholic         | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antidiabetic          | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antihangover          |                                                                                                                                                        |
| Antiketotic           | Merck 11th Edition                                                                                                                                     |
| Antinauseant          | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Laxative              |                                                                                                                                                        |
| Neoplastic            | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses                                                                              |
| Sweetener 2 x glucose | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |

## GLUCOSE

Fruit -- 46000.0 -0.41 \*

**Activities (7)**

|                   |                                                                                                                                                        |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acetylcholinergic |                                                                                                                                                        |
| Antiedemic        | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antihepatotoxic   | Merck 11th Edition                                                                                                                                     |
| Antiketotic       | Merck 11th Edition                                                                                                                                     |
| Antivaricose      | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Hyperglycemic     | Merck 11th Edition                                                                                                                                     |
| Memory-Enhancer   | Science News, 138: 189, 1990.                                                                                                                          |

## GUM

Root -- -- \*

## HEMICELLULOSE

Root -- -- \*

## IRON

Shoot 17.0 202.0 -0.4 \*

**Activities (6)**

|                                     |                                                                                                                                          |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Antiakathisic                       | Martindale's 29th                                                                                                                        |
| Antianemic                          | Martindale's 29th                                                                                                                        |
| Anticanker                          |                                                                                                                                          |
| Anticheilitic                       | Davies, S., and Stewart, A. 1990. Nutritional Medicine. Avon Books, New York. 509pp.                                                     |
| Antimennorrhetic 100 mg/day/wmn/orl | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Prooxidant                          |                                                                                                                                          |

## ISOBETANINE

Fruit -- -- \*

## ISOPREBETANINE

Fruit -- -- \*

## ISOQUERCITRIN

Leaf -- -- \*

**Activities (22)**

|                                           |                                                                                                                                                                                                                                                   |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACE-Inhibitor ID50=300 ug/ml rat (24 hr.) |                                                                                                                                                                                                                                                   |
| Aldose-Reductase-Inhibitor                | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                                                                                            |
| Antibacterial                             | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                                                                                            |
| Anticancer                                |                                                                                                                                                                                                                                                   |
| Antielastase IC50=0.7 ug/ml               |                                                                                                                                                                                                                                                   |
| Antifeedant                               | Russell, G. B., Phytochemical resources for crop protection, N. Z. J. Technol., 2, 1986, 127-134.                                                                                                                                                 |
| Antiinflammatory                          |                                                                                                                                                                                                                                                   |
| Antinociceptive                           |                                                                                                                                                                                                                                                   |
| Antioxidant 1/4 quercetin                 |                                                                                                                                                                                                                                                   |
| Antioxidant IC50=9.0 uM                   |                                                                                                                                                                                                                                                   |
| Antiradicular 1/4 quercetin               |                                                                                                                                                                                                                                                   |
| Antitumor                                 |                                                                                                                                                                                                                                                   |
| Antitumor-Promoter                        |                                                                                                                                                                                                                                                   |
| Cancer-Preventive                         | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.                                                                                                                                                           |
| Capillarigenic                            |                                                                                                                                                                                                                                                   |
| Diaphoretic                               |                                                                                                                                                                                                                                                   |
| Diuretic 10 ppm                           | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                                                                                                                        |
| Hypotensive                               | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. Chem. Pharm. Bull. 38(4): 1049-1052, 1990. |
| Insectiphile                              | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.                                                                                            |
| Pesticide                                 |                                                                                                                                                                                                                                                   |
| TNF-alpha-Inhibitor                       |                                                                                                                                                                                                                                                   |
| Topoisomerase-II-Inhibitor 550 ug/ml      | Bernard, F. X., Sable, S., Cameron, B., Provost, J., Desnottes, J. F., Crouzet, J., Blanche, F. 1997. Glycosylated Flavones as Selective Inhibitors of Topoisomerase IV. Antimicrobial Agents & Chemotherapy, 41: 992-998.                        |

## JALIGONIC-ACID

Root -- -- \*

**Activities (2)**

|                  |  |
|------------------|--|
| Antiinflammatory |  |
| Diuretic         |  |

## NIACIN

Shoot 12.0 143.0 0.44 \*

## Activities (39)

|                                      |                                                                                                                                                                |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Allergenic                           | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| AntiLyme 50 mg/day                   | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.                                         |
| AntiMeniere's                        |                                                                                                                                                                |
| AntiRaynaud's 1,500-4,000 mg/day     |                                                                                                                                                                |
| Antiacrodynic                        |                                                                                                                                                                |
| Antiallergic 50 mg/2x/day            | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antialzheimeran                      |                                                                                                                                                                |
| Antiambyopic                         |                                                                                                                                                                |
| Antianginal                          |                                                                                                                                                                |
| Anticataract                         |                                                                                                                                                                |
| Antichilblain                        | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Anticonvulsant 3 g/day               | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antidementia                         |                                                                                                                                                                |
| Antidermatitic                       | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                   |
| Antidiabetic                         |                                                                                                                                                                |
| Antidysphagic                        |                                                                                                                                                                |
| Antiepileptic 3 g/day                | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antihangover 50 mg                   |                                                                                                                                                                |
| Antihistaminic 50 mg 2x/day          | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antihyperactivity 1.5-6 g/day        | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antiinsomnic 1 g/day                 | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antineuralgic                        |                                                                                                                                                                |
| Antiparkinsonian 100 mg/day          | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antipellagric                        | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp.                                                                   |
| Antiscotomic                         |                                                                                                                                                                |
| Antispasmodic 100 mg 2x/day          | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antivertigo                          |                                                                                                                                                                |
| Cancer-Preventive                    | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.                                                                        |
| Cardioprotective                     |                                                                                                                                                                |
| Circulotonic                         |                                                                                                                                                                |
| Fibrinolytic                         |                                                                                                                                                                |
| Hepatoprotective                     |                                                                                                                                                                |
| Hepatotoxic                          |                                                                                                                                                                |
| Hypocholesterolemic 50-100 mg 3x/day |                                                                                                                                                                |
| Hypoglycemic                         |                                                                                                                                                                |
| Hypolipidemic                        |                                                                                                                                                                |
| Sedative                             | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Serotonergic                         | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf).               |
| Vasodilator                          | Martindale's 29th                                                                                                                                              |

## OLEANOLIC-ACID

Root

--

--

\*

## Activities (64)

|                                      |                                                                                                                                                                                                                    |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Abortifacient                        |                                                                                                                                                                                                                    |
| AntiHIV IC50=21.8 ug/ml              |                                                                                                                                                                                                                    |
| AntiHIV EC50=1.7 ug/ml               | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61(9): 1090-1095.                             |
| AntiPGE2 IC50=24 uM                  |                                                                                                                                                                                                                    |
| AntiTGF-beta IC50=19-24 uM           |                                                                                                                                                                                                                    |
| Antiallergic                         |                                                                                                                                                                                                                    |
| Antiarrhythmic 40 mg/kg              |                                                                                                                                                                                                                    |
| Antiatherosclerotic                  |                                                                                                                                                                                                                    |
| Antibacterial MIC=625-1,250 ug/ml    |                                                                                                                                                                                                                    |
| Anticarcinomic                       | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.                                             |
| Anticariogenic                       | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.                                                                                   |
| Anticomplement IC40-50 0.01 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Anticomplement IC80-90 0.05 mM/l gpg | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Antiedemic IC36=40 mg/kg ipr rat     |                                                                                                                                                                                                                    |
| Antifertility                        |                                                                                                                                                                                                                    |

|                                           |                                                                                                                                                                                                                                       |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antigingivitic MIC=625-1,250 ug/ml        |                                                                                                                                                                                                                                       |
| Antihepatotoxic                           |                                                                                                                                                                                                                                       |
| Antihyperlipidemic                        |                                                                                                                                                                                                                                       |
| Antiinflammatory 40 mg/kg ipr             | Aquino, R., De Feo, V., De Simone, F., Pizza, C.* and Cirino, G. Plant Metabolites. New Compounds And Anti-Inflammatory Activity Of Uncaria tomentosa. <i>Journal of Natural Products</i> , 54(2): 453-459, 1991.                     |
| Antiischemic 40 mg/kg                     |                                                                                                                                                                                                                                       |
| Antileukemic                              | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.                                                                |
| Antileukotriene IC50=17 uM                |                                                                                                                                                                                                                                       |
| Antimalarial IC50=70-89 ug/ml             |                                                                                                                                                                                                                                       |
| Antinephritic IC50=19-24 uM               |                                                                                                                                                                                                                                       |
| Antioxidant                               | Balanehru, S. and Nagarajan, B. 1992. Intervention of Adriamycin Induced Free Radical Damage. <i>Biochemistry International</i> 28(4): 735-744, 1992.                                                                                 |
| Antioxidant IC46=10 uM                    |                                                                                                                                                                                                                                       |
| Antiperiodontic MIC=625-1,250 ug/ml       |                                                                                                                                                                                                                                       |
| Antiperoxidant IC30=200 ug/ml             |                                                                                                                                                                                                                                       |
| Antiplaque MIC=625-1,250 ug/ml            |                                                                                                                                                                                                                                       |
| Antiplasmodial IC50=70-89 ug/ml           |                                                                                                                                                                                                                                       |
| Antisarcomic                              |                                                                                                                                                                                                                                       |
| Antiseptic MIC=625-1,250 ug/ml            |                                                                                                                                                                                                                                       |
| Antitumor                                 |                                                                                                                                                                                                                                       |
| Antitumor (Breast)                        | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.                                                                |
| Antitumor (Colon)                         | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.                                                                |
| Antitumor (Kidney)                        | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.                                                                |
| Antitumor (Lung)                          | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.                                                                |
| Antitumor (Pancreas)                      | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46.                                                                |
| Antiulcer >carbenoxolone                  |                                                                                                                                                                                                                                       |
| Antiviral EC50=1.7 ug/ml                  | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095.                                               |
| Antiviral IC50=21.8 ug/ml                 | Kashiwada, Y., et. al. 1998. Anti-AIDS Agents. 30. Anti-HIV Activity of Oleanolic Acid, Pomolic Acid, and Structurally Related Triterpenoids. <i>J. Nat. Prod.</i> , 61 (9): 1090-1095.                                               |
| Aromatase-Inhibitor                       |                                                                                                                                                                                                                                       |
| Beta-Blocker                              |                                                                                                                                                                                                                                       |
| Beta-Glucuronidase-Inhibitor ~100 mg/kg   |                                                                                                                                                                                                                                       |
| COX-2-Inhibitor IC50=295 uM/              |                                                                                                                                                                                                                                       |
| COX-2-Inhibitor                           | Ringbom, T., Seguar, L., Noreen, Y., Perera, P., Bohlin, L. 1998. Ursolic Acid from <i>Plantago major</i> , a Selective Inhibitor of Cyclooxygenase-2 Catalyzed Prostaglandin Biosynthesis. <i>J. Nat. Prod.</i> , 61(10): 1212-1215. |
| Cancer-Preventive                         | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp.                                                                                                                                               |
| Cardioprotective 40 mg/kg                 |                                                                                                                                                                                                                                       |
| Cardiotonic                               |                                                                                                                                                                                                                                       |
| Cyclooxygenase-Inhibitor                  |                                                                                                                                                                                                                                       |
| Diuretic                                  | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.                                                                                                      |
| Elastase-Inhibitor IC50=~15 uM            |                                                                                                                                                                                                                                       |
| Hepatoprotective                          | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 211.                                                             |
| Hypolipemic                               |                                                                                                                                                                                                                                       |
| Hypotensive                               |                                                                                                                                                                                                                                       |
| Immunomodulator                           |                                                                                                                                                                                                                                       |
| Leucocytogenic                            |                                                                                                                                                                                                                                       |
| NF-kB-Inhibitor                           |                                                                                                                                                                                                                                       |
| Phagocytotic                              |                                                                                                                                                                                                                                       |
| Piscicide                                 | ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes.                                                                                                    |
| Prostaglandin-Synthesis-Inhibitor igs mus |                                                                                                                                                                                                                                       |
| Sedative                                  |                                                                                                                                                                                                                                       |
| Uterotonic                                |                                                                                                                                                                                                                                       |
| Vasopressor                               |                                                                                                                                                                                                                                       |

|                                  |       |       |        |      |
|----------------------------------|-------|-------|--------|------|
| OXYMYRISTIC-ACID                 | Root  | --    | --     | *    |
| PAP(=POKEWEED-ANTIVIRAL-PROTEIN) | Plant | --    | --     | *    |
| PHOSPHORUS                       | Shoot | 440.0 | 5238.0 | 0.84 |

**Activities (4)**

|                  |                                                                                              |
|------------------|----------------------------------------------------------------------------------------------|
| Antiosteoporotic | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp. |
| Anxiolytic       |                                                                                              |
| Immunostimulant  | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp. |
| Osteogenic       | Davies, S., and Stewart, A. 1990. <i>Nutritional Medicine</i> . Avon Books, New York. 509pp. |

PHYTOLACCAGENIC-ACID

Root -- -- \*

PHYTOLACCAGENIN

Root -- -- \*

PHYTOLACCANIN

Plant -- -- \*

PHYTOLACCASAPONINS

Plant -- -- \*

PHYTOLACCASIDE

Plant -- -- \*

PHYTOLACCATOXIN

Plant -- -- \*

**Activities (3)**

|                  |
|------------------|
| Convulsant       |
| Hypertensive     |
| Respirastimulant |

PHYTOLACCIN

Plant -- -- \*

PHYTOLACCINIC-ACID

Plant -- -- \*

PHYTOLACCOGENIC-ACID

Plant -- -- \*

POKEBERRYGENIN

Plant -- -- \*

POKEWEED-ANTIVIRAL-PROTEIN

Plant -- -- \*

PREBETANINE

Fruit -- -- \*

PROTEIN

Shoot 26000.0 311000.0 0.9 \*

QUERCETIN-3-L-ARABINO-7-D-GLUCOSIDE

Fruit -- -- \*

RESIN

Root -- -- \*

RIBOFLAVIN

Shoot 3.0 39.0 2.0 \*

**Activities (15)**

AntiLyme 50 mg/day

Martindale's 28th

Antiarabiflavinotic 2-10 mg/day orl

Werbach, M. 1993. *Healing with Food*. Harper Collins, New York, 443 pp.

Anticarpal-Tunnel 50 mg/day

Werbach, M. 1993. *Healing with Food*. Harper Collins, New York, 443 pp.

Anticataract 15 mg/day

Anticephalagic

Anticervicaldysplastic 1.6-10 mg/day

Anticheilitic

Antidecubitic

Antiglossitic

Davies, S., and Stewart, A. 1990. *Nutritional Medicine*. Avon Books, New York. 509pp.

Antikeratitic

Antimigraine

Antioxidant

Antipellagric

Antiphotophobic

Davies, S., and Stewart, A. 1990. *Nutritional Medicine*. Avon Books, New York. 509pp.

Cancer-Preventive

Stitt, P. A. *Why George Should Eat Broccoli*. Dougherty Co, Milwaukee, WI, 1990, 399 pp.

STARCH

Root -- -- \*

**Activities (5)**

|                      |                                                                                                                                                                |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Absorbent            | Martindale's 29th                                                                                                                                              |
| Antidote (Iodine)    | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Antinesidioblastosic | Martindale's 29th                                                                                                                                              |
| Emollient            | Martindale's 29th                                                                                                                                              |
| Poultice             | Martindale's 29th                                                                                                                                              |

TANNIN

Root -- -- \*

**Activities (35)**

|                                           |                                                                                                                                                                                                                                                          |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Anthelmintic                              |                                                                                                                                                                                                                                                          |
| AntiHIV                                   |                                                                                                                                                                                                                                                          |
| Antibacterial                             |                                                                                                                                                                                                                                                          |
| Anticancer                                |                                                                                                                                                                                                                                                          |
| Anticariogenic                            |                                                                                                                                                                                                                                                          |
| Antidiarrheic                             |                                                                                                                                                                                                                                                          |
| Antidysenteric                            |                                                                                                                                                                                                                                                          |
| Antihepatotoxic                           |                                                                                                                                                                                                                                                          |
| Antihypertensive                          |                                                                                                                                                                                                                                                          |
| Antilipolytic                             |                                                                                                                                                                                                                                                          |
| Antimutagenic                             |                                                                                                                                                                                                                                                          |
| Antinephritic                             | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Antiofidic                                | Economic & Medicinal Plant Research, 5: 363.                                                                                                                                                                                                             |
| Antioxidant<br>IC50=1.44 ug/ml            |                                                                                                                                                                                                                                                          |
| Antioxidant 1/3<br>quercetin              |                                                                                                                                                                                                                                                          |
| Antiradicular 500<br>mg/kg/day orl mus    | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Antiradicular 1/3<br>quercetin            |                                                                                                                                                                                                                                                          |
| Antirenitic                               | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Antitumor                                 |                                                                                                                                                                                                                                                          |
| Antitumor-Promoter                        |                                                                                                                                                                                                                                                          |
| Antiulcer                                 |                                                                                                                                                                                                                                                          |
| Antiviral                                 |                                                                                                                                                                                                                                                          |
| Cancer-Preventive                         | HerbalGram No. 22 - Spring 1990, page 14.                                                                                                                                                                                                                |
| Carcinogenic                              |                                                                                                                                                                                                                                                          |
| Chelator                                  |                                                                                                                                                                                                                                                          |
| Cyclooxygenase-<br>Inhibitor              |                                                                                                                                                                                                                                                          |
| Glucosyl-<br>Transferase-Inhibitor        |                                                                                                                                                                                                                                                          |
| Hepatoprotective                          |                                                                                                                                                                                                                                                          |
| Immunosuppressant                         |                                                                                                                                                                                                                                                          |
| Lipoxygenase-<br>Inhibitor                |                                                                                                                                                                                                                                                          |
| MAO-Inhibitor                             |                                                                                                                                                                                                                                                          |
| Ornithine-<br>Decarboxylase-<br>Inhibitor |                                                                                                                                                                                                                                                          |
| Pesticide                                 |                                                                                                                                                                                                                                                          |
| Psychotropic                              | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Xanthine-Oxidase-<br>Inhibitor            |                                                                                                                                                                                                                                                          |

THIAMIN

Shoot

1.0

10.0

-0.3

\*

**Activities (31)**

|                                  |                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analgesic 1-4 g/day              | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| AntiLyme 50 mg                   |                                                                                                                                                                |
| Antialcoholic 50-100 mg/day      |                                                                                                                                                                |
| Antialzheimeran 100-3,000 mg/day | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antianorectic                    | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, Londón. 791 pp. |
| Antibackache 1-4 g/day           | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antiberiberi                     |                                                                                                                                                                |
| Anticancer                       |                                                                                                                                                                |
| Anticardiospasmic                |                                                                                                                                                                |
| Anticataract                     |                                                                                                                                                                |
| Anticolitic                      |                                                                                                                                                                |
| Antidecubitic                    |                                                                                                                                                                |
| Antideliriant                    |                                                                                                                                                                |
| Antidementia                     |                                                                                                                                                                |
| Antidiarrheal                    |                                                                                                                                                                |
| Antifatigue                      | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, Londón. 791 pp. |
| Antigastritic                    | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, Londón. 791 pp. |
| Antihangover 50 mg               |                                                                                                                                                                |
| Antiheartburn                    |                                                                                                                                                                |
| Antiherpetic                     |                                                                                                                                                                |
| Antimigraine                     |                                                                                                                                                                |
| Antimycarditic                   |                                                                                                                                                                |
| Antineuronal 1-4 g/day           | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antineurasthenic                 |                                                                                                                                                                |
| Antineuritic                     |                                                                                                                                                                |
| Antineuropathic 50 mg            | Werbach, M. 1993. <i>Healing with Food</i> . Harper Collins, New York, 443 pp.                                                                                 |
| Antipoliomyelic                  |                                                                                                                                                                |
| Insectifuge 75-150 mg/man/day    | Martindale's 28th                                                                                                                                              |
| Neuroprotective                  |                                                                                                                                                                |
| Pesticide                        |                                                                                                                                                                |

WATER

Shoot -- 916000.0 0.83 \*

XYLOSE

Root -- -- -- \*

**Activities (3)**

|              |                    |
|--------------|--------------------|
| Antidiabetic |                    |
| Diagnostic   | Martindale's 28th  |
| Dye          | Merck 11th Edition |